

WE CLAIM AS OUR INVENTION:

1. A method for generating an image of an examination subject using a tomography-capable X-ray device having a multi-row X-ray detector array, an X-ray radiator rotatable around a system axis that emits a conical X-ray beam, and a positioning device adapted to receive an examination subject thereon for positioning the subject in a direction parallel to said system axis at different positions parallel to the system axis relative to the X-ray radiator, comprising the steps of:

generating raw data by the radiating said examination subject with said X-ray beam in a rotation scan to acquire a plurality of projections during at least one revolution or partial revolution of said X-ray radiator around the subject, and by a linear scan wherein transmission values are acquired at different positions of said subject parallel to said system axis, without rotation of said X-ray radiator, with all of said transmission values generated by said linear scan being acquired in a continuous linear scanning movement; and

generating an image of said subject from said raw data generated by said rotation scan and said linear scan.

2. A method as claimed in claim 1 comprising acquiring the transmission values during the continuous linear scanning movement in direct succession, with no intermediate rotation of said X-ray radiator.

3. A method as claimed in claim 1 comprising acquiring all of said projections by said rotation scan in one continuous rotational movement of the X-ray radiator.

4. A method as claimed in claim 1 comprising, during said rotation scan, successively moving said subject on said positioning device to respectively different positions in said direction parallel to said system axis, and acquiring a plurality of projections at each of said positions with at least one revolution of the X-ray radiator around the subject.

5. A method as claimed in claim 1 comprising, in said rotational scan, acquiring a plurality of projections at a single position of said subject in said direction parallel to said system axis during at least one revolution of the X-ray radiator around the subject, and employing a flat detector as said multi-row X-ray detector array.

6. A method as claimed in claim 1 comprising conducting said linear scan as a topogram of said subject.

7. A method for generating an image of an examination subject using a tomography-capable X-ray device having a multi-row X-ray detector array, an X-ray radiator rotatable around a system axis that emits a conical X-ray beam, and a positioning device adapted to receive an examination subject thereon for positioning the subject in a direction parallel to said system axis at different positions parallel to the system axis relative to the X-ray radiator, comprising the steps of:

acquiring a topogram of the subject by measuring transmission values of the

subject at different positions of the subject along said direction parallel

to the system axis, without rotation of said X-ray radiator;

displaying said topogram at a display unit and selecting a relevant region of

the subject in the displayed tomogram;

storing said topogram;

obtaining raw data of the examination subject in a rotation scan by acquiring a plurality of projections of the subject during at least one revolution or partial revolution of the X-ray radiator around the subject; and reconstructing an image of the subject from the stored topogram in combination with the raw data acquired during the rotation scan.

8. A method as claimed in claim 7 comprising executing said rotation scan to cover at least said relevant region.

9. A method as claimed in claim 7 comprising acquiring all of the projections in said rotation scan in one continuous rotational movement of the X-ray radiator.